

1 INCH-POUND 1

MIL-T-27/170B
13 March 1991
SUPERSEDING
MIL-T-27/170A
14 SEPTEMBER 1977

MILITARY SPECIFICATION SHEET

TRANSFORMER, AUDIO FREQUENCY, TF5R21ZZ

(B) Inactive for new design after the date of this specification.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation. MIL-T-27.

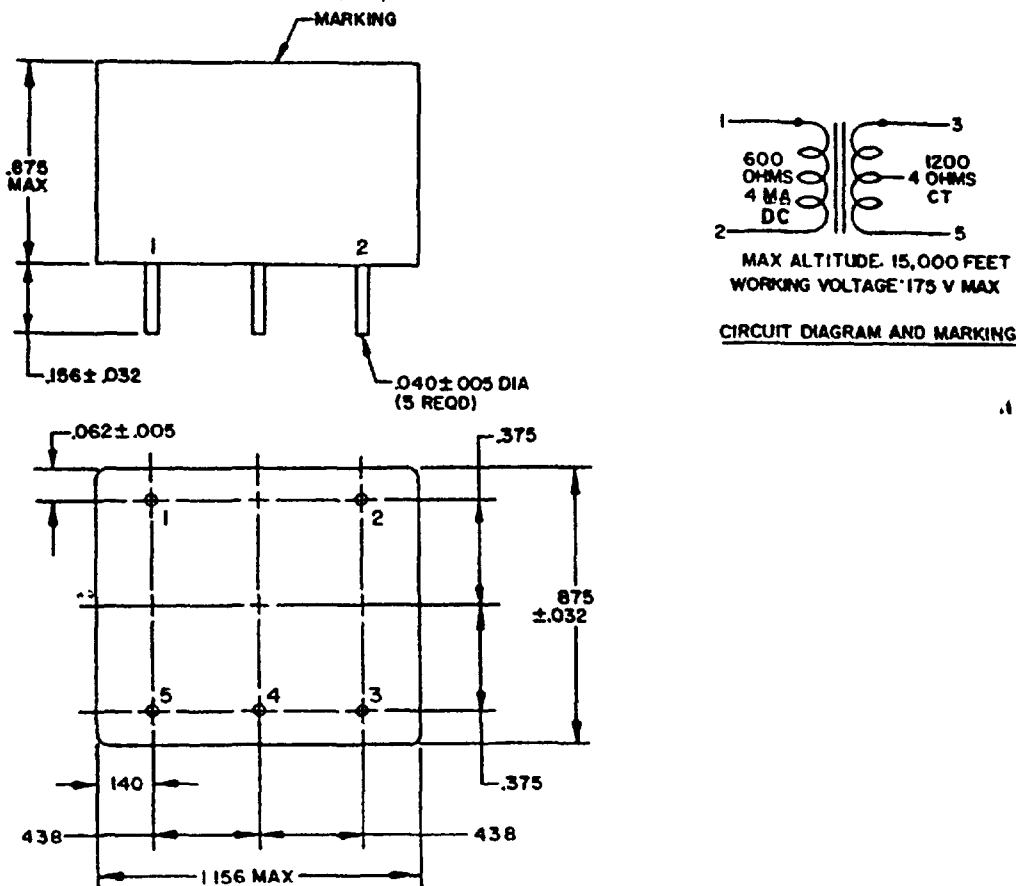


FIGURE 1. Dimensions and configurations.

(B) denotes changes

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| Inches | mm |
|--------|-------|
| .005 | 0.13 |
| .032 | 0.81 |
| .040 | 1.02 |
| .062 | 1.57 |
| .140 | 3.56 |
| .156 | 3.96 |
| .375 | 9.52 |
| .438 | 11.13 |
| .875 | 22.22 |
| 1.156 | 29.36 |

NOTES.

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .010$ (0.25 mm).
4. Marking shall be on the top of the case.
5. Terminal identification marking shall be on the sides of the case.

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS: (When numbers in parentheses, i.e., (1-2) are used, they indicate the winding and the extreme terminals of the windings.)

Electrical ratings:

Power level: 1 milliwatt.

Working voltage: 175 volts maximum.

Primary current 4 milliamperes, dc.

Primary impedance (1-2). 600 ohms.

Secondary load impedance (3-5): 1,200 ohms center tap.

DC resistance:

(1-2): 47 ohms ± 25 percent.

(3-5). 93 ohms ± 25 percent.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Epoxy.

Altitude: 15,000 feet maximum.

Terminals: Pin (printed circuit).

Material: Nickel iron alloy tin dipped.

Diameter: 0.040 ± 0.005 .

Length: 0.156 ± 0.032 inch.

Weight: 1.750 ounces maximum.

Operating temperature range: -55°C to $+105^{\circ}\text{C}$.

Terminal strength: MIL-STD-202, method 211, test condition A, 2 pounds.

Resistance to soldering heat: MIL-STD-202, method 210, temperature $271^{\circ}\text{C} \pm 5^{\circ}\text{C}$ ($520^{\circ} \pm 9^{\circ}\text{F}$), and immersion 15 seconds duration minimum.

Vibration (high frequency): MIL-STD-202, method 204, test condition D.

Shock (specified pulse): MIL-STD-202, method 213, test condition I, except 11 milliseconds duration and half sine waveform.

Dielectric withstanding voltage:

At sea level 500 volts, rms.

At reduced barometric pressure 300 volts, rms.

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Electrical characteristics:

Primary impedance: 600 ohms ± 10 percent with 1 volt, 1 kilohertz and 4 milliamperes, dc applied to (1-2) and 1,200 ohms across (3-5).

Frequency response:

$Z_S = 600$ ohms (1-2).

$Z_L = 1,200$ ohms (3-5).

$E_S = 12$ volts.

Reference frequency = 1 kilohertz.

Frequency range: 300 to 3,400 hertz ± 1 dB.

Polarity Additive with terminals 2 and 3 connected.

⑧ Quality assurance provisions

Qualification inspection: Not applicable.

Quality conformance inspection. Groups A and B tests of MIL-T-27 shall be applicable.

Marking location: See figure 1.

Part number: M27/170-01.

CONCLUDING MATERIAL

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - OS, SH
Air Force - 17, 99
DLA - ES

User activities:

Army - AR, ME
Navy - AS, MC
Air Force - 19

Preparing activity:

Army - ER

Agent

DLA - ES

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